

Tilt Sensor Switch

Item No.	RBS070412	Description	Tilt Sensor Switch	Version	10
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● FUNCTIONS

1. 45° Tilt Detecting within a 360° radius with 45° bended leads.
2. Up-Side Down Detecting



● APPLICATIONS

1. Wake up systems for power saving, such like remote controller.
2. Anti-theft / Anti-tamper devices
3. Alarm system
4. Earthquake detecting
5. Automatically shut off for Sporting equipment
6. Entertainment device: video game consoles, toys
7. Garage door opener.

● FEATURES

1. Suitable for sloping PCB at 45°.
2. Switch state: Normal close.
3. Housing made of high insulation plastic material, free from electric conduction and rust problem.
4. Gold-plated ball and terminals, low possibility of oxidization.
5. All plastic materials subject to industrial purpose, resist high temperature and meet fireproof function.
6. Simple ON and OFF signals, easy for design.
7. RoHS compliance, an ideal substitute for mercury switch.
8. A more economical tilt and rotation detection option than IC design solution.
9. All made in Taiwan and examined before shipment.

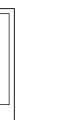


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● PATENTS

1. Taiwan Patent No. M 437246
2. Taiwan Patent No. I 476797
3. Taiwan Patent No. I510356
4. Japan Patent No. 3158127(RBS070311)
5. U.S.A. Patent No. US 6,518,523 B1
6. U.S.A. Patent No. US 7,256,360 B1
7. U.S.A. Patent No. US 9,058,945 B2
8. China Patent No. 201220308500.8
9. China Patent No. 201220079187.5
10. China Patent No. 201210218323.9

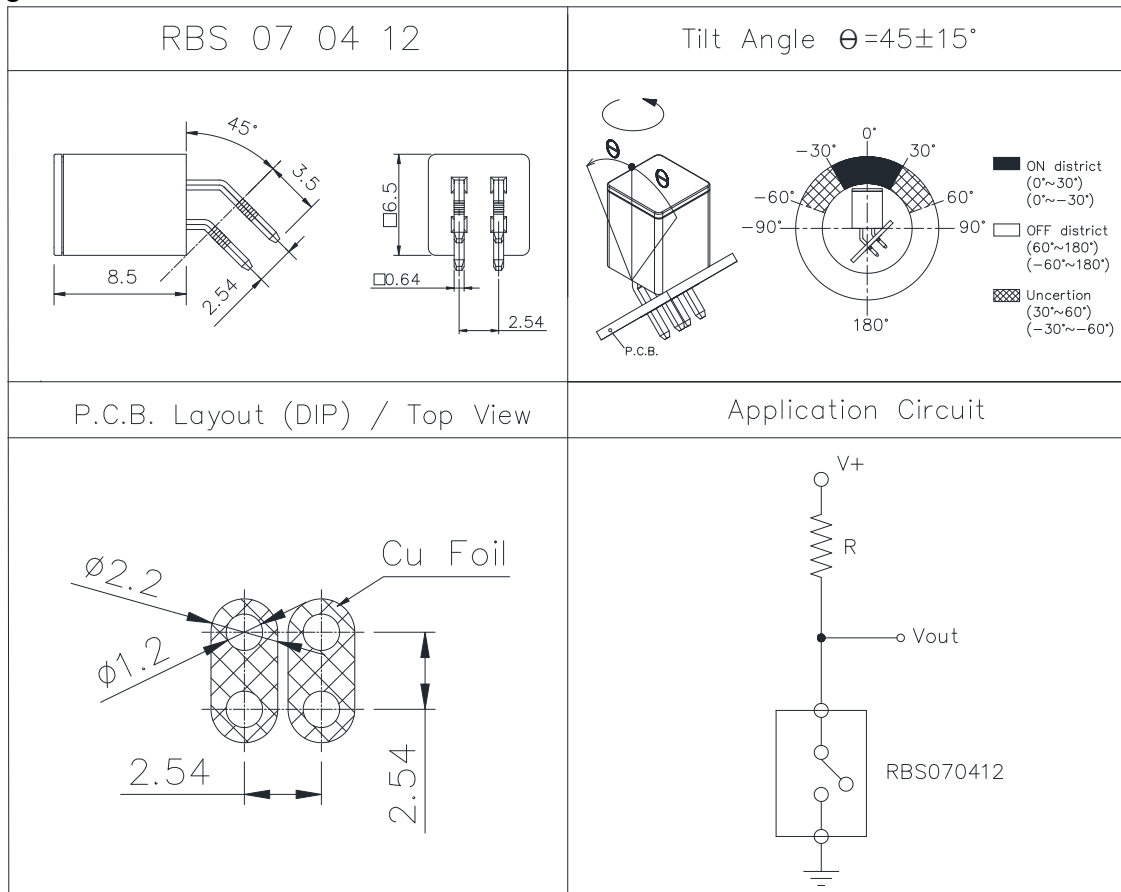


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● DIMENSIONS / OPERATION / P.C.B. LAYOUT (Unit: mm, Tolerance: ±0.25mm)

Fig. 1



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● Current/Voltage Suggested

Input Current (mA)	Operating Voltage (V)	Condition
1.0	5	--

● ELECTRICAL CHARACTERISTICS

1.	Contact Rating	10mA, 5VDC
2.	Contact Resistance	10Ω max.
3.	Differential Angle	Refer to Fig .1
4.	Insulation Resistance	1000 MΩ min., 100 VDC
5.	Dielectric Strength	500 VDC min., 1 minute
6.	Capacitance	5 pF max.
7.	Average conductive rate	98% min.



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● RELIABLE TEST ITEMS

Reliable Test for RBS070412

Test Item	Standard	Contents
Operating Temperature	MIL-STD-202G, TEST METHOD 107G, TEST A	-25°C~85°C
Storage Temperature	MIL-STD-202G, TEST METHOD 107G, TEST A	-40°C~85°C
Humidity	MIL-STD-202G, TEST METHOD 103B	40°C/95%RH
Mechanical Life	--	2 Hz, horizontal 1,000,000 times
Electrical Life	--	100,000 times



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● **SOLDERING CONDITION**

Following soldering conditions are for reference only, please use soldering information that solder paste manufacturer recommends.

Condition Operation Method	Soldering Temperature	Soldering Time	Wattage of Manual Soldering	Suitable Production Process
Wave Soldering	260±5°C	< 5 seconds max.	-	DIP
Manual Soldering	300±5°C	< 3 seconds max.	30W or Temperature-controlled manual soldering	DIP



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● PACKAGE

	Part Number	Package	Quantity	Total	Dimension(mm)
1.	RBS070412	PE Bag	500 pcs	500 pcs	205L*145W
		Inner Box	8 PE Bags	4,000 pcs	348L*191W*85H
		Carton	3 Boxes	12,000 pcs	364L*278W*213H

※ Package shown as below for reference.



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● NOTE

1. Suggestion for usage: For vibration usage or application, we suggest to add hysteresis for IC; if vibration is heavy, optical type of sensor switch is recommended.
2. For the continued product improvement as one of the company policy, specifications may change or update without notice. The latest information can be obtained through our sales offices. Normally, all products are supplied under our standard conditions.
3. If buyer's products will stay in power supply for a long time which needs very high stability, optical sensor switch is strongly recommended.

● PRECAUTIONS FOR USE

1. If the products is intended to be used for other endurance equipment requiring higher safety and reliability such as life support system, space and aviation devices, disaster and safety system, it's necessary to make verification of conformity or contact us for the details before using.
2. Do not try to clean the switch with a solvent or similar substance after the soldering process.
3. Use water-soluble flux may damage the switch.
4. If soldering temperature exceeds our specification, sensor switch could get apart.
5. Do not use switch in the environment of high humidity, because such an environment may cause the leakage current between the terminals.
6. Please do not exceed the rated load as there will be a risk of disabling the product function.
7. In the circuit, switch should not be near or directly connected with the magnetic component solder joints (for example: relays, transformers, etc.).

